

Workshop IV: Transfer Phenomena

Monday May 16, 2005

- 8:00–8:45 *Check-In/Light Breakfast (Hosted by IPAM)*
- 8:45–9:00 *Welcome and Opening Remarks*
- 9:00–10:00 **Christian Ringhofer** (Arizona State University)
Entropy Based Discretization Methods for the Boltzmann Equations and Quantum Mechanical Corrections
- 10:00–10:30 *Break*
- 10:30–11:30 **Irene Gamba** (University of Texas, Austin)
Deterministic solvers to Boltzmann-Poisson Dynamics
- 11:30–2:00 *Lunch (on your own)*
- 2:00–3:00 **Jim Morel** (Los Alamos National Laboratory)
Discrete-Ordinates Methods for Radiative Transfer in the Non-Relativistic Stellar Regime
- 3:00–3:30 *Break*
- 3:30–4:30 **Edward Larsen** (University of Michigan)
Particle Transport in 1-D Stochastic Diffusive Media
- 4:30–5:30 **James Warsa** (Los Alamos National Laboratory)
Krylov Methods for Transport Applications
- 5:30–7:00 *Wine/Cheese Reception (Hosted by IPAM)*

Tuesday May 17, 2005

- 8:00–9:00 *Continental Breakfast*
- 9:00–10:00 **Donald Batchelor** (Oak Ridge National Laboratory)
Mechanisms of transport in fusion plasmas and approaches to fusion simulation
- 10:00–10:30 *Break*
- 10:30–11:30 **Randy Jokipii** (University of Arizona)
Transport of Cosmic Rays in Turbulent Astrophysical Plasmas
- 11:30–2:00 *Lunch (on your own)*
- 2:00–3:00 **Marvin Adams** (Texas A&M University)
Modern Methods for Nuclear Reactor Analysis
- 3:00–3:30 *Break*

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3:30–4:30 **Matthias Liebendorfer** (University of Toronto/CITA)
Neutrino transport near compact objects

Wednesday May 18, 2005

8:00–9:00 *Continental Breakfast*

9:00–10:00 **David Levermore** (University of Maryland)
Transition Regime Models for Radiative Transport

10:00–10:30 *Break*

10:30–11:30 **Louis Howell** (Lawrence Livermore National Laboratory)
Parallel Adaptive Mesh Refinement for Radiation Transport and Diffusion

11:30–2:00 *Lunch (on your own)*

2:00–3:00 **Juergen Steinacker** (Max Planck Institute for Astrophysics)
The Challenge of Radiative Transfer in Star Formation Regions

3:00–3:30 *Break*

3:30–4:30 **Sebastian Wolf** (Max Planck Institute for Astrophysics)
Polarization and Self-Consistent Radiative Transfer in Dusty Media: The Monte-Carlo Approach

Thursday May 19, 2005

8:00–9:00 *Continental Breakfast*

9:00–10:00 **William Watson** (University of Illinois at Urbana-Champaign)
Astrophysical Maser Radiation

10:00–10:30 *Break*

10:30–11:30 **Adalbert Pauldrach** (Ludwig-Maximilian-University, Munich)
Consistent Models of the Expanding Atmospheres of Hot Star

11:30–2:00 *Lunch (hosted by IPAM)*

2:00–3:00 **Peter Nugent** (Lawrence Berkeley Laboratory)
1-D Spectrum Synthesis and Supernovae

3:00–3:30 *Break*

3:30–4:30 **Roberto Casini** (National Center for Atmospheric Research)
Scattering polarization in the solar atmosphere

Friday May 20, 2005

- 8:00–9:00 *Continental Breakfast*
- 9:00–10:00 **Tom Abel** (Stanford University)
Radiative Transfer in Early Structure Formation
- 10:00–10:30 *Break*
- 10:30–11:30 **Peter Hoeflich** (University of Texas)
Methods of Radiation Hydrodynamics for Rapidly Expanding Atmospheres and their 3D Signatures
- 11:30–12:00 *Panel Discussion*
- 12:00–12:30 *Conclusion*

